

SAW Duplexer

LTE & WCDMA Band 5

- Balanced
- Low insertion attenuation and low passband ripple
- High isolation between Tx and Rx
- RoHS compatible

P/N: **SPSD05B03A**

Date: Feb. 20, 2022

Version: 1.0

Sappland Microelectronics

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Tel: +86-571-81113802

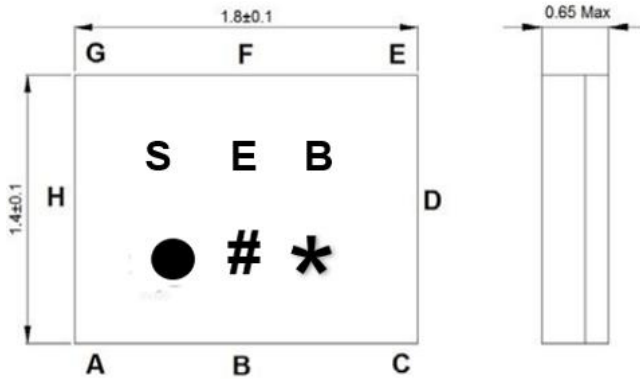
Fax: +86-571-81113812

www.sappland.com

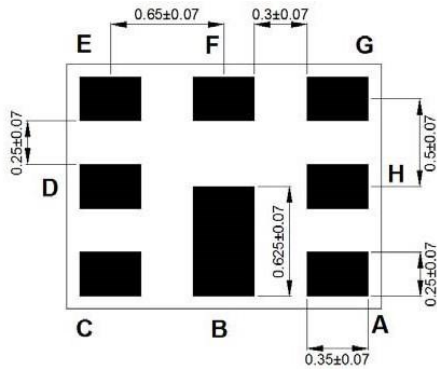
Revision Number	Date	Description
[Series]_v1.0	Feb-20-2022	Initial Release

- Operating temperature : -20 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29 dBm 5000h 50 deg.C
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)

Package Dimensions (PKG Size: 1.8×1.4×0.65mm)

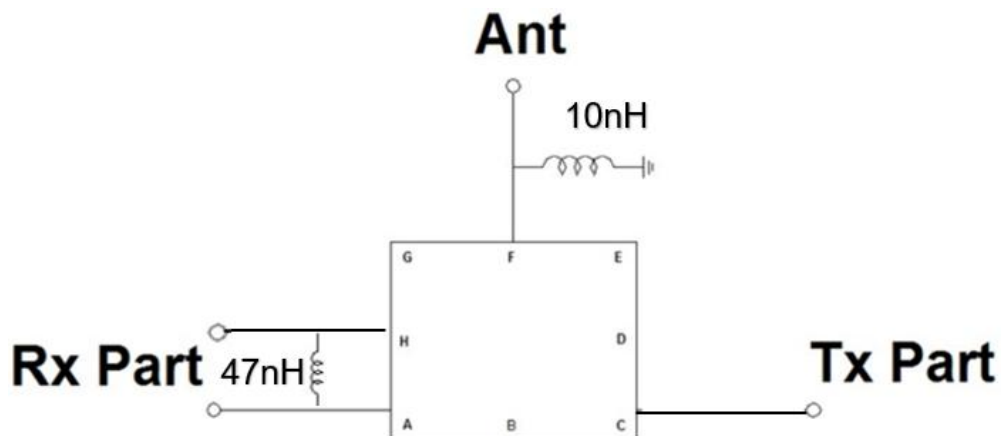


Marking Descriptions	
S	SAPPLAND
E	BAND
B	Version
# *	Date



Pin Description	
B D E G	GROUND
F	ANT
C	Tx (836.5MHz)
A H	Rx (881.5MHz)

Testing Environment



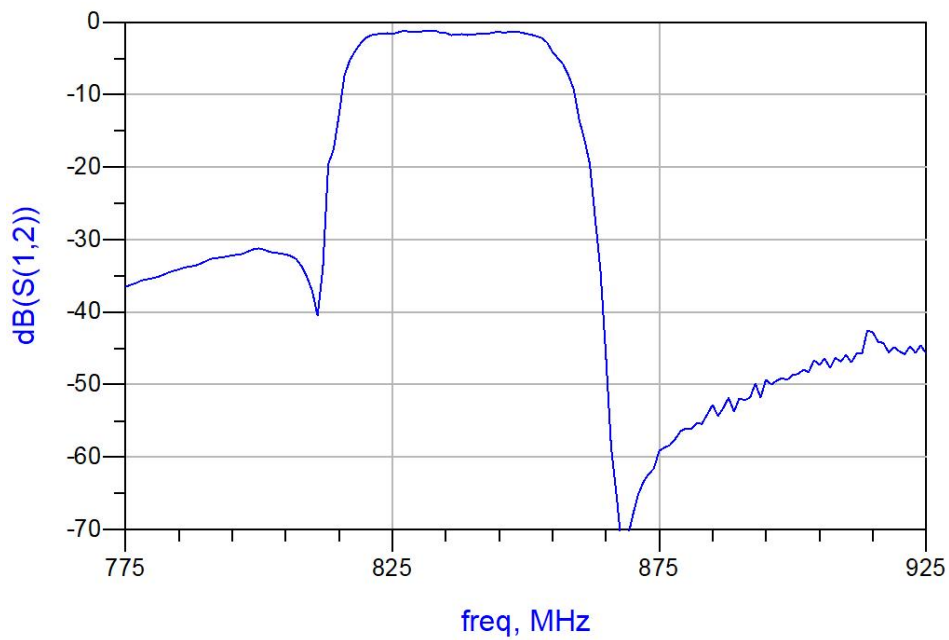
Electrical Characteristic

Item		Condition MHz			Characteristic			Unit
					Min.	Typ.*	Max.	
Tx to ANT	Insertion loss	824.00	...	849.00		2.0	2.3	dB
	Amplitude ripple	824.00	...	849.00		0.8	1.5	dB _{p-p}
	VSWR	824.00	...	849.00		2.1	2.3	
	Absolute attenuation	100.00	...	764.00	30	40		dB
		764.00	...	804.00	28	31		dB
		860.00	...	869.00	3	10		dB
		869.00	...	894.00	44	54		dB
		1559.00	...	1605.89	25	30		dB
		1683.00	...	1919.60	22	27		dB
		1920.00	...	2557.00	18	23		dB
		3286.00	...	3406.00	15	20		dB
ANT to Rx								
	Insertion loss	869.00	...	894.00		2.2	2.5	dB
	Amplitude ripple	869.00	...	894.00		0.8	1.5	dB _{p-p}
	VSWR	869.00	...	894.00		1.8	2.1	
	Absolute attenuation	100.00	...	804.00	50	65		dB
		824.00	...	849.00	45	48		dB
		849.00	...	854.00	17	54		dB
		909.00	...	979.00	15	20		dB
		1693.00	...	1788.00	48	58		dB
		1850.00	...	2315.00	45	53		dB
		2400.00	...	2682.00	44	50		dB
		3476.00	...	3576.00	38	44		
		4345.00	...	4470.00	40	45		
		4900.00	...	5950.00	34	42		
Tx to Rx	Isolation	824.00	...	849.00	55	60		dB
		869.00	...	894.00	55	59		dB

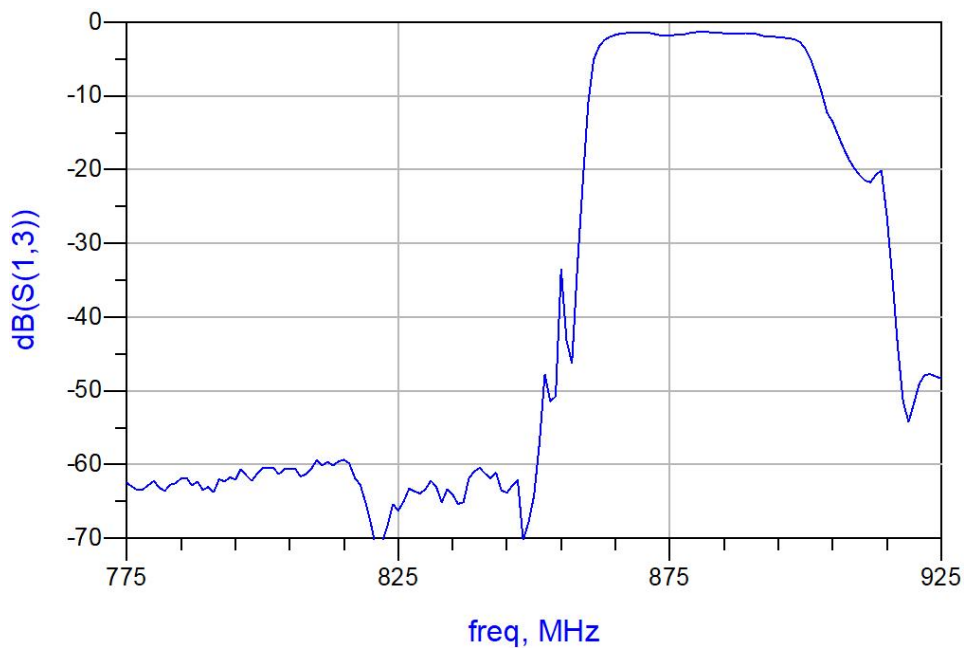
*: Typical value at 25±2deg.C

Frequency response

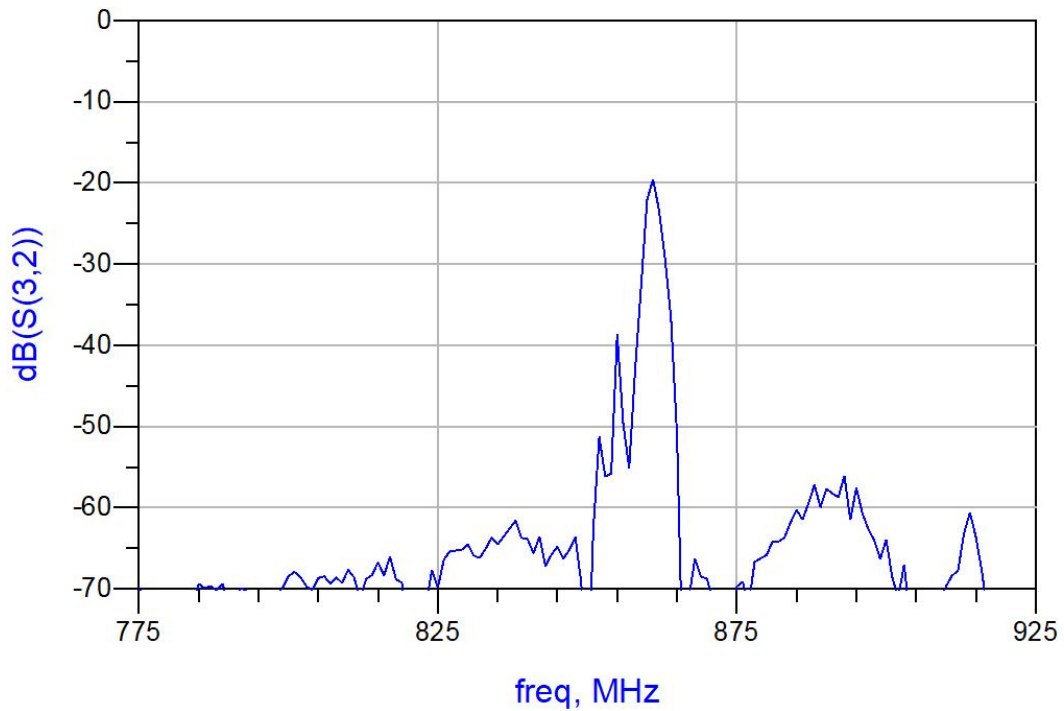
Tx- ANT



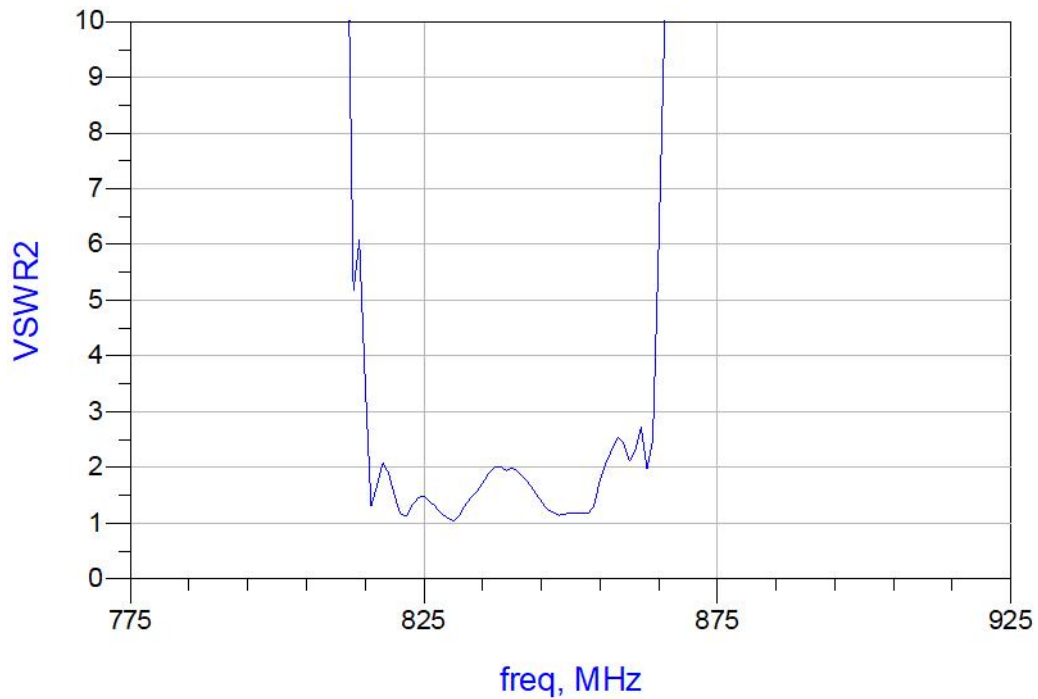
ANT-RX



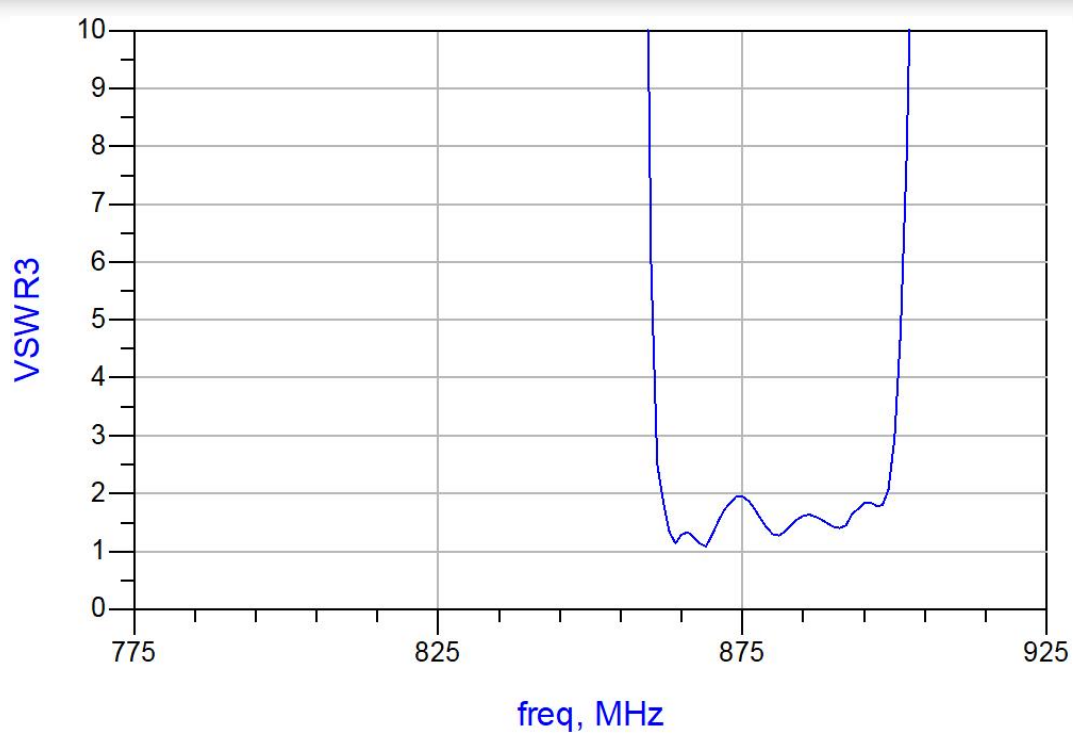
TX- RX isolation



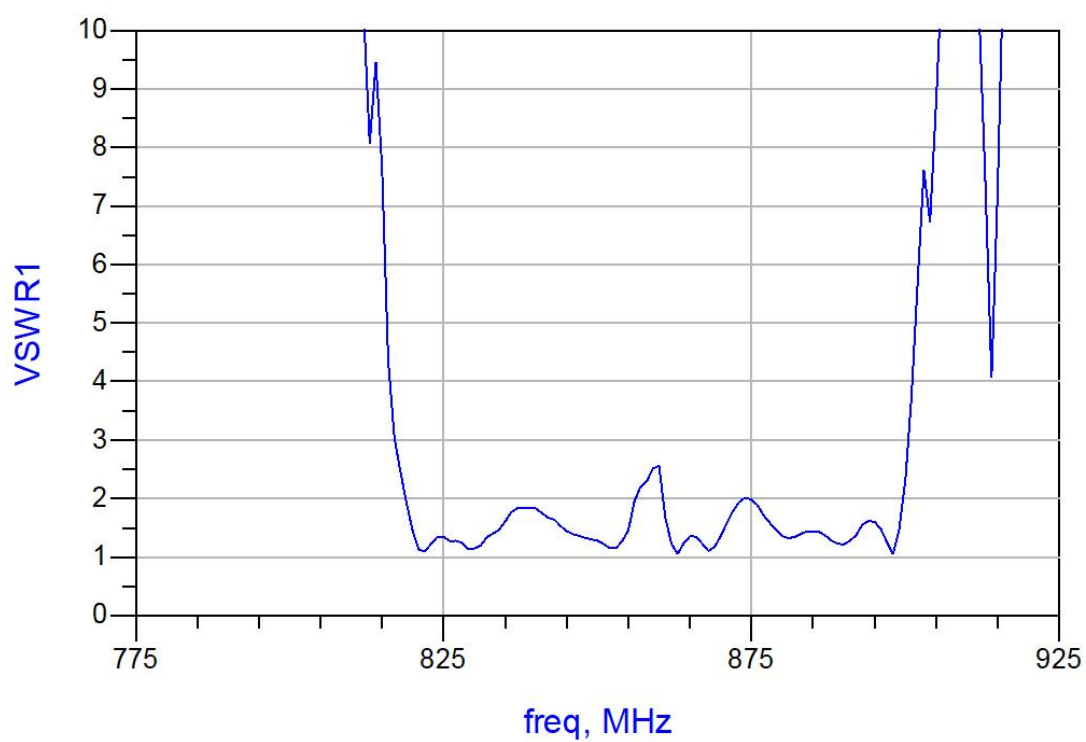
VSWRs at TX, RX and Antenna



TX

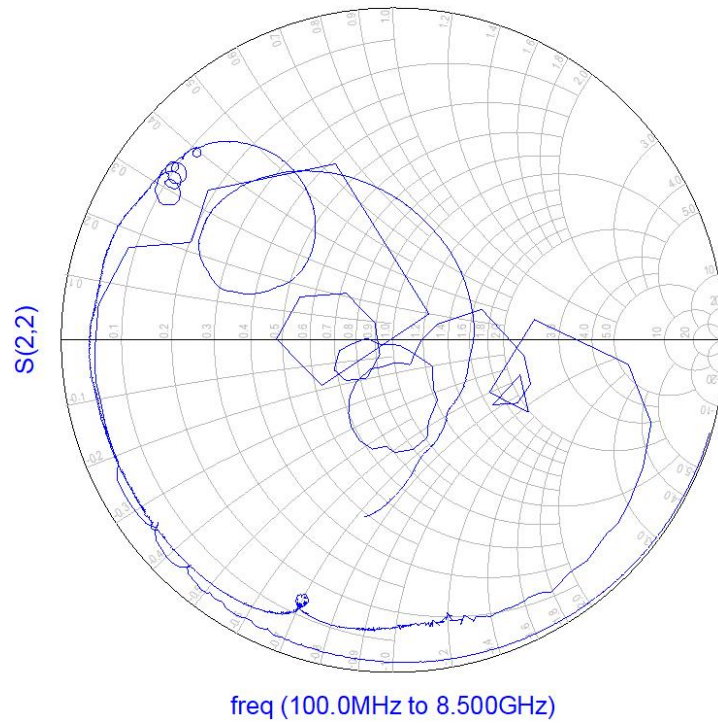


RX

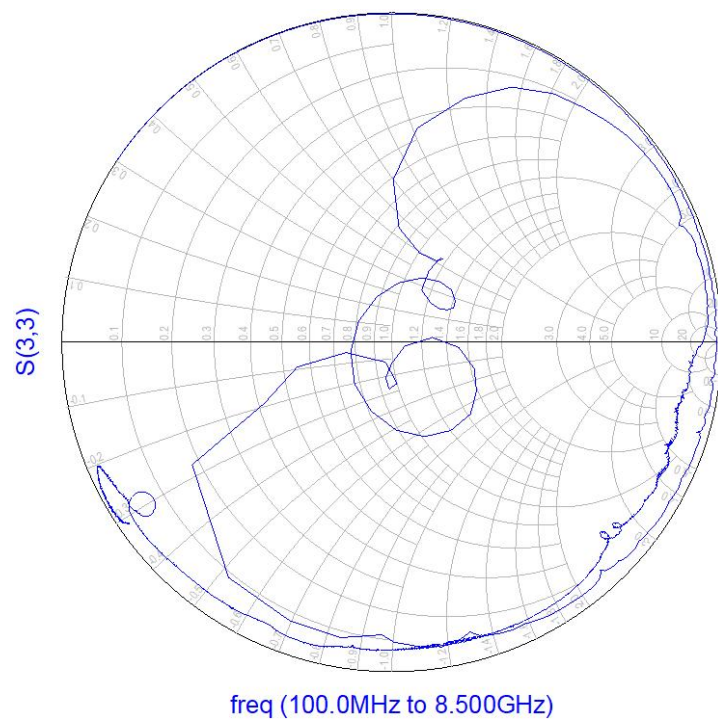


ANT

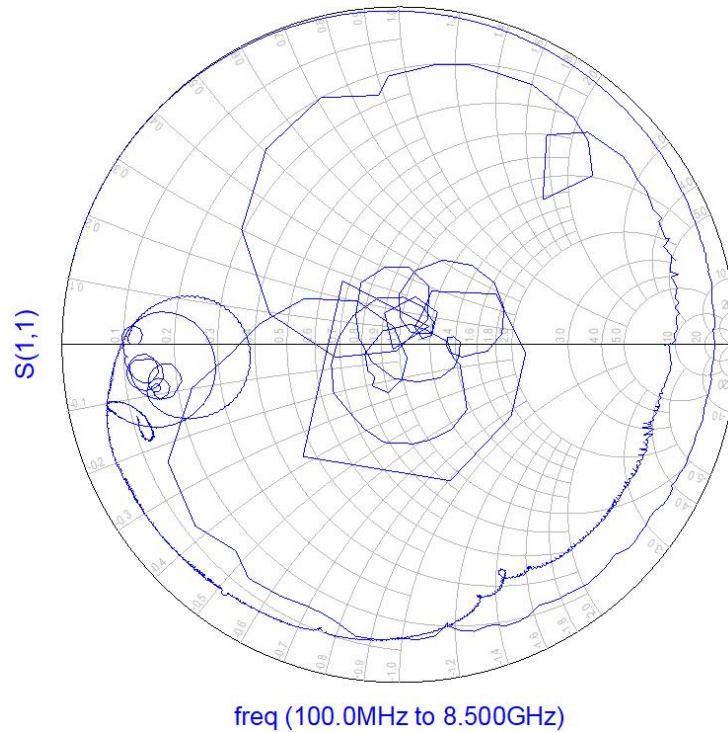
Smith Chart(Tx Port)



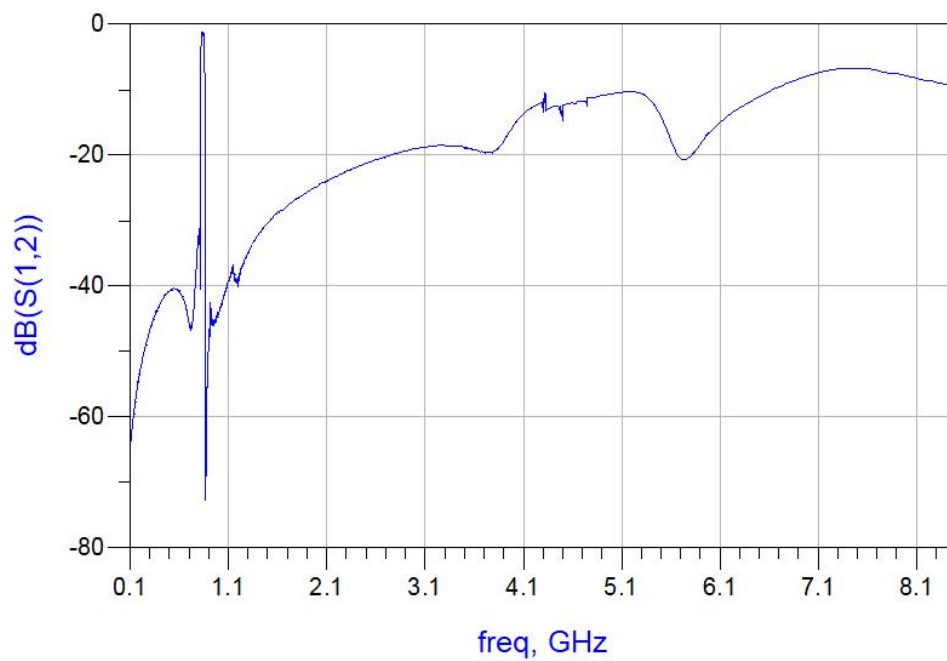
Smith Chart(Rx Port)



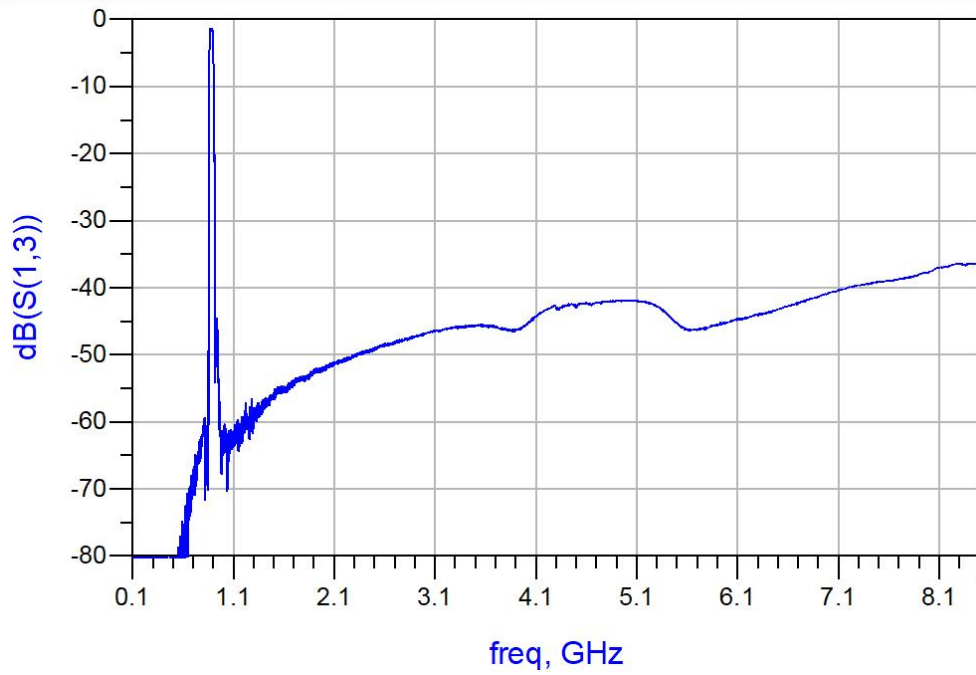
Smith Chart(Ant Port)



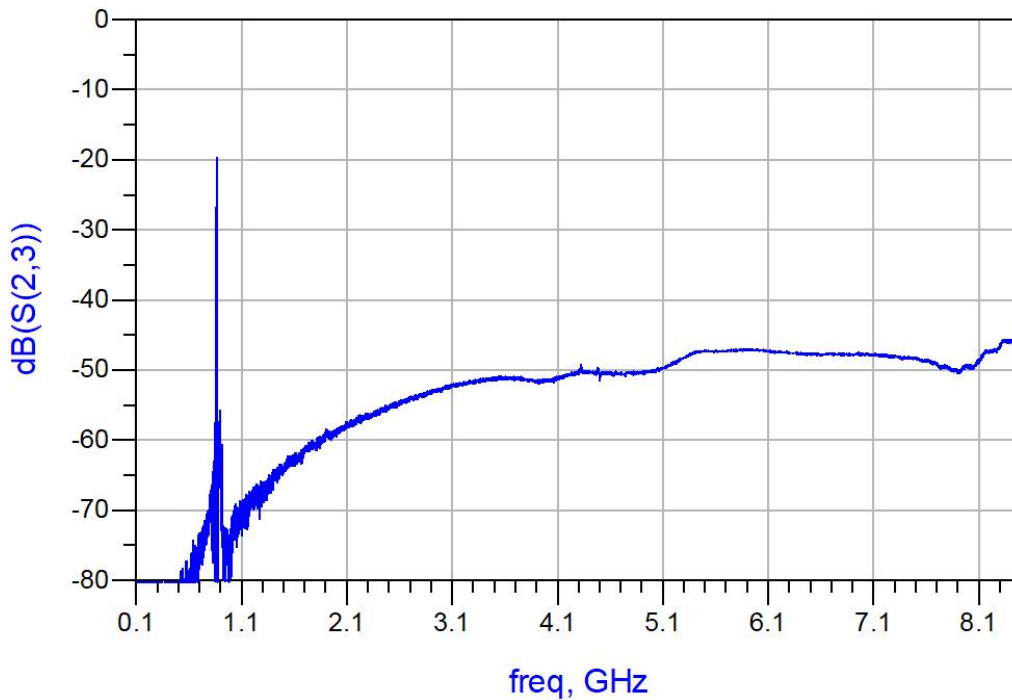
Wide Span



TX



RX

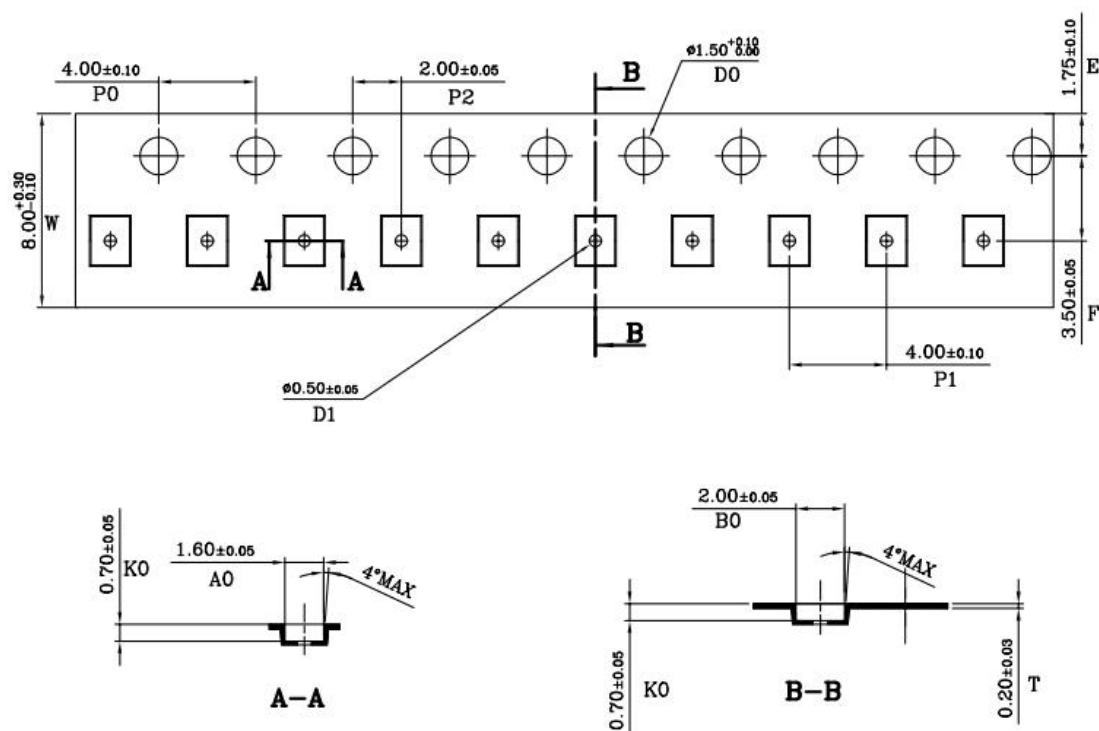


ISO

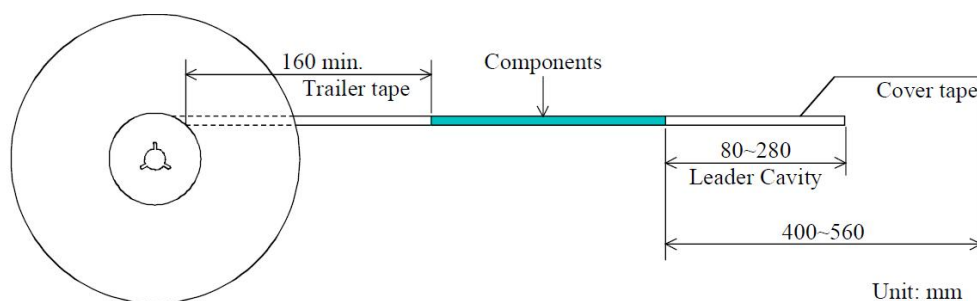
Tape and Reel

Reeling Qty: 3000 pcs/reel

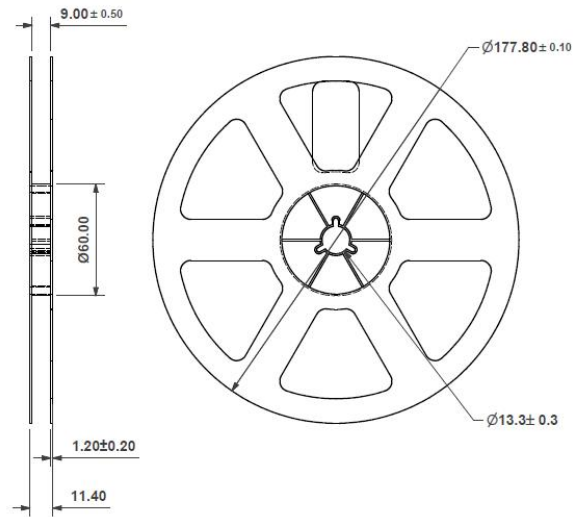
Carrier Tape



Tape



Reel



Important Notice

PLEASE READ THIS NOTICE BEFORE USING OUR PRODUCTS.

1. All specifications are based on the test circuit
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. This is the optimum impedance in order to achieve the performance shown